

PUBLIC WORKSHOP TO DISCUSS POSSIBLE REGULATORY APPROACHES TO
REDUCE EMISSIONS FROM STATIONARY DIESEL-FUELED ENGINES AND
TRANSPORTATION REFRIGERATION UNITS

**Proposed Airborne Toxic Control Measure to
Reduce Diesel Particulate Matter Emissions
from In-Use Stationary Diesel-Fueled Engines
That are Greater than or Equal to
50 horsepower**

April 4, 2002



California Environmental Protection Agency

Air Resources Board

**Proposed In-Use Stationary
Diesel-Fueled Engine ATCM**

- **Who must comply?**
- **What are the standards?**
- **Are there any exemptions from meeting the standards?**
- **What must I do to demonstrate compliance with the standards?**
- **What is the compliance schedule for meeting the standards?**
- **What are the recordkeeping, reporting, and monitoring requirements?**

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Who must comply?

- The proposed draft ATCM would apply to owners/operators of in-use stationary diesel-fueled engines greater than or equal to 50 horsepower
- “In-use” means purchased prior to the New Engine ATCM becoming effective
- “Stationary” means at one location greater than 12 months
 - ◆ Special case: Any gen-set rated greater than or equal to 1500 bhp (1 MW) used to power a facility is considered a stationary engine, no matter how long it remains at one location

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What are the proposed standards?

- The Proposed ATCM establishes standards for
 - ◆ the type of fuel used, and
 - ◆ the diesel PM emissions
- Separate emission standards for emergency standby and prime applications
- The proposed ATCM also limits any increase in NMHC, NO_x, and CO emissions

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Proposed Fuel Usage Requirements

- Owner or Operator must use
 - ◆ at a minimum, fuel that meets specifications for CARB diesel, or
 - ◆ verified alternative diesel fuel

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Proposed Emission Standards for In-Use Emergency Standby Engines

- Reduce diesel PM by 85% or more
- OR
- Comply with a 0.15 g/bhp-hr diesel PM emission rate
- OR
- Replace engine with engine that meets the New Engine ATCM requirements for emergency standby engines

AND

- In meeting the above requirements, do not:
 - ✦ increase NMHC, NO_x, or CO emissions by 10 percent from baseline levels
 - ✦ increase the NO₂ weight fraction of total NO_x by 20% or more

Proposed Emission Standards For In-Use Prime Engines

- **Reduce diesel PM by 85% or more**

OR

- **Comply with a 0.01 g/bhp-hr diesel PM emission rate**

OR

- **Replace engine with engine that meets the New Engine ATCM requirements for prime engines**

AND

- **In meeting the above requirements, do not:**

- ✦ increase NMHC, NOx, or CO emissions by 10 percent from baseline levels
- ✦ increase the NO₂ weight fraction of total NOx by 20% or more

Are there any exemptions from meeting the standards?

- **Yes, the following categories are proposed to be exempt from meeting the standards:**

- ◆ **Engines less than 50 horsepower**

- ◆ **Agricultural Engines**

- ✦ Being addressed in separate process by Agricultural Working Group

- ◆ **Engines in compliance with October 2000 Risk Management Guidance**

- ✦ Owners have already invested in technologies that have reduced risk significantly

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Are there any exemptions from meeting the standards? (continued)

■ The following category is also proposed to be exempt from meeting the standards:

- ◆ **Remotely located engines, operating a limited number of hours (pending findings made by District APCO)**
 - ✦ Located at least 5 miles from any receptor
 - ✦ 50 annual hours of operation or less
 - ✦ Economically infeasible
 - ✦ Valid for 3 year period, then may reapply
 - ✦ Sunsets in 2012

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What must I do to demonstrate compliance with the proposed emission standards?

- **The owner or operator must submit to the district APCO emission test data showing compliance with the standard**
 - ◆ **To show compliance with a limit (0.15 or 0.01), emission testing must be done after emission control strategy implementation**
 - ◆ **To show compliance with a percent reduction, emission testing must be done both prior to (baseline) and after emission control strategy implementation**

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What must I do to be in compliance with the proposed emission standards? (continued)

- **An owner or operator may use the following sources of emission test data to show compliance**
 - ◆ **Conduct emission test of engine**
 - ARB Method 5 and 100, carried out under steady state operation in accordance with ISO 8178 loading cycles
 - NO₂ test method measurement in accordance with Verification Procedure
 - Alternative methods approved by district APCO
 - ◆ **Off-Road Engine Certification Data**
 - ◆ **Emission Test Data submitted to the ARB by emission control technology manufacturers when going through the Diesel Emission Control Strategy Verification Procedure**

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What is the proposed compliance schedule for meeting the standards?

- **Owners and operators of in-use stationary diesel-fueled engines must be in compliance with the standards by the following dates, unless they own four or more engines.**
 - ◆ **Pre-1990 model year - July,1 2005**
 - ◆ **Post-1990 to Pre-1996 model year - July 1, 2006**
 - ◆ **Post-1996 model year - July 1, 2007**

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What is the proposed compliance schedule for meeting the standards? (continued)

- **Owners or operators of four or more engines may submit a compliance plan to the district APCO for approval**
 - ◆ **Plan provides information on engines and how each engine will meet the standards**
 - ◆ **Plan provides specific compliance schedules for each engine with all engines in compliance by no later than July 1, 2008.**

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What are the proposed Recordkeeping, Reporting, and Monitoring Requirements?

- **The ATCM identifies recordkeeping, reporting, and monitoring requirements addressing the following:**
 - ◆ **Notification by owners or operators of all in-use stationary diesel-fueled engines, except agricultural engines and < 50 hp**
 - ◆ **Initial demonstration of compliance**
 - ◆ **Additional requirements for exempted remote engines**
 - ◆ **Additional requirements for emergency standby engines**
 - ◆ **Backpressure monitoring requirements for DPF technologies**

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Notification

- **No later than 6 months after implementation, each owner or operator shall provide the District APCO with specified information...**

e.g., contact information, engine and engine use, typical operation, identification of emission control strategies currently in place, and type of fuel used ;

...unless one of the following criteria is met:

- ✦ **Agricultural application**
- ✦ **< 50 horsepower**
- ✦ **District elects to waive all or part of information requested because information is in current permit**

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Initial Demonstration of Compliance

- **Owner or operator subject to the emission standards must**
 - ◆ **provide the district APCO with emission test data for purposes of showing compliance with the standards**
 - ◆ **emission test data must be submitted by the appropriate compliance dates.**

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Additional requirements for exempted remote engines

- **Installation of a non-resettable hour meter**
- **Owner/operator must keep records of the number of hours the engines are operated on a monthly basis, and retain records for 3 years**

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Additional requirements for emergency standby engines

- **Installation of a non-resettable hour meter**
- **Owner/operator must keep log of usage**
 - ◆ **Total hours**
 - ◆ **Maintenance/testing**
 - ◆ **Emission testing pursuant to ATCM**
 - ◆ **Emergency hours and nature of emergency**

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Backpressure monitoring requirements for DPF technologies

- **Backpressure monitor required to notify owner/operator when high backpressure limit of engine is approached**
- **District APCO can require additional monitoring dependent on control strategy used**

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